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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte CHRISTOPHER QUINN, REED QUINN, KIT MORRISON, and
MATTHEW HAWKES

Appeal 2016-003390
Application 13/970,238
Technology Center 1700

Before KAREN M. HASTINGS, DONNA M. PRAISS, and
SHELDON M. McGEE, *Administrative Patent Judges*.

McGEE, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's final decision to reject claims 1–20. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

BACKGROUND

The subject matter on appeal relates to a repair kit for securing elements to one another using a repair wrap which includes a fabric pre-impregnated with a hardening material and a pouch configured to prevent the repair wrap from coming into contact with water. Specification, hereinafter “Spec.,” ¶¶ 8, 52.

Representative claim 1 is reproduced from page 24 of the Appeal Brief (Claims Appendix), as follows:

1. A repair kit for securing elements to one another using repair wrap, the repair kit comprising:

a roll of repair wrap, wherein the repair wrap includes:

a fabric, wherein the fabric includes:

one or more fibers; and

the one or more fibers are knit to form the fabric; and

a hardening material, wherein the hardening material:

is pre-impregnated in the fabric in an inactivated state; and

the amount of pre-impregnated hardening material is sufficient to completely saturate the fabric;

wherein the pre-impregnated fabric is configured to be wrapped around a portion of an inanimate object; and

wherein curing the hardening material is configured to form a shell about the portion of the inanimate object; and

a pouch, wherein the pouch is configured to prevent the repair wrap from coming in contact with water.

REFERENCES

The Examiner relies on the following references as evidence of unpatentability:

Neamy, et al. (hereinafter “Neamy”)	US 5,658,650	Aug. 19, 1997
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Callinan, et al. (hereinafter “Callinan”)	US 5,540,652	July 30, 1996
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Scholz, et al. (hereinafter “Scholz”)	US 5,273,802	Dec. 28, 1993
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PlumbingSupply.com *The Leading Online Plumbing Supplier Since 1995*
<http://www.PlumbingSupply.com/repairkit.html>
(archived July 17, 2012) (hereinafter “Plumbing Supply”)

REJECTIONS ON APPEAL

- I. Claims 1, 9–12, and 20 under 35 U.S.C. § 103(a) as unpatentable over Neamy (Final Act. 2–4; Ans. 2–4);
- II. Claims 2–8 and 15–18 under 35 U.S.C. § 103(a) as unpatentable over Neamy in view of Plumbing Supply (Final Act. 4–9; Ans. 4–9);
- III. Claim 19 under 35 U.S.C. § 103(a) as unpatentable over Neamy, in view of Plumbing Supply, and further in view of Scholz (Final Act. 9–10; Ans. 9);
- IV. Claims 1, 9–14, and 20 under 35 U.S.C. § 103(a) as unpatentable over Callinan (Final Act. 10–12; Ans. 10–12);
- V. Claims 2–8 and 15–17 under 35 U.S.C. § 103(a) as unpatentable over Callinan in view of Plumbing Supply (Final Act. 12–17; Ans. 12–17); and

- VI. Claim 19 under 35 U.S.C. § 103(a) as unpatentable over Callinan, in view of Plumbing Supply, and further in view of Scholz (Final Act. 17–18; Ans. 17).

DISCUSSION

We address Rejections IV–VI first, because these rejections cover all claims except for claim 18.

Rejection IV

The Examiner finds that Callinan teaches all recited elements of claim 1, but “does not teach the fabric is completely saturated with the resin.” Final Act. 10–11; Ans. 10. The Examiner concludes that “it would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the amount of resin” present in the fabric and determined that “[t]he burden is upon the [Appellants] to demonstrate that the claimed amount is critical and has unexpected results.” Final Act. 10–11; Ans. 10.

Appellants state that the Examiner’s rejection of claim 1 “suffers at least the same [deficiencies] noted above in relation to [Neamy] and will not be repeated here for the sake of brevity.” Appeal Br. 18. As an initial matter, we caution Appellants that simply pointing to previous arguments made with respect to a rejection based on one reference, without any explanation as to why such arguments are relevant to a rejection based on a different reference, poses an inherent risk of running afoul of our Rules. Specifically, we emphasize that “arguments shall *explain* why the examiner erred as to *each ground* of rejection contested.” 37 C.F.R. § 41.37(c)(1)(iv) (emphasis added). “[An appeal] brief must make all arguments accessible to

the judges, rather than ask them to play archaeologist with the record.”

DeSilva v. DiLeonardi, 181 F.3d 865, 867 (7th Cir. 1999).

Thus, we only address the substance of those arguments made specific to Rejection IV (Appeal Br. 18–21), as well as those arguments Appellants make against Rejection I that appear to us to be potentially relevant to Rejection IV. To the extent Appellants intended for us to apply other arguments made against Rejection I to present Rejection IV, we decline to consider such arguments because they fail to comply with our Rule 41.37.

In the present case, Appellants allege certain deficiencies of the “rejection of claim 1 over [Callinan]” as “the same” over the rejection “to [Neamy].” Appeal Br. 18. Appellants argue claims 1, 9, and 11–14 as a group (Appeal Br. 8–12, 18–19) and argue claim 20 separately. We therefore decide the propriety of this rejection on the basis of claims 1 and 20, and claims 9–14 will stand or fall with independent claim 1. 37 C.F.R. § 41.37(c)(1)(iv).

Claim 1

Appellants first contend that the “criticality of complete saturation has been demonstrated” by pointing to ¶ 53 of their Specification and noting that complete saturation, “1) prevents channels forming throughout the curing process; 2) allows for a water tight seal; 3) maximizes strength of repair; and 4) prevents weak spots within the repair.” Appeal Br. 8. Appellants urge that “[n]one of these benefits are described in any prior art reference cited by the Examiner; indeed, the benefits cannot be stated since the prior art fails to teach complete saturation.” *Id.* at 9.

We are not persuaded by Appellants’ criticality arguments. Specifically, we observe that claim 1 does not require the resulting shell that

is formed about the portion of the inanimate object to be without channels or sealed so that it is “water tight.” Nor does claim 1 require any specific repair strength or prevention of weaknesses therein.

Rather, claim 1 recites that “the amount of pre-impregnated hardening material is sufficient to completely saturate the fabric.” To the extent that Appellants are arguing that lack of channel formation, a water tight seal, and a strong repair would be inherent results of using the claimed amount “sufficient to completely saturate the fabric,” we are likewise unpersuaded. In this regard, Appellants reproduce a portion of ¶ 53 of their Specification to support their position that “the criticality of complete saturation has been demonstrated.” Appeal Br. 8. A careful reading of ¶ 53 in its entirety, however, does not support Appellants’ contention. Specifically, ¶ 53 states, in relevant part, that “[t]he ratio of hardening material to fabric is critical to produce the desired properties” and that “[t]he ideal amount of hardening material 104 is the amount that *just barely but completely saturates* the cloth.” Spec. ¶ 53 (emphasis added). The Specification then explains how “too much hardening material 104 will ruin the water tight property of the wrap” because of the possibility of gas generation during the curing process, which may form bubbles that connect, which in turn may cause water-leakage channels to form. *Id.* Conversely, ¶ 53 states that “[l]ikewise too little hardening material 104 is just as problematic” because “there will be dry places in the fibers” resulting in leaks and significant reduction in the strength and the rigidity of the repair.

Thus, if ¶ 53 evinces any criticality, such criticality appears to be based on having a precise amount or ratio of hardening material to fabric (i.e., “just barely but completely” saturating the cloth). According to

Appellants' Specification, either too much or too little hardening material present in the fabric causes leaks and/or reduced strength of the repair. Spec. ¶ 53. Claim 1, however, is not limited to such a precise amount or ratio of hardening material to fabric. Rather, claim 1 simply recites "the amount of pre-impregnated hardening material is sufficient to completely saturate the fabric." Because Appellants do not point us to any definition of what they regard as "completely saturate[d]" (e.g., the upper and lower boundaries for the amounts or ratios of pre-impregnated hardening material present in the claimed fabric), we agree with the Examiner (Ans. 19) that "the scope of the claim includes greater than complete saturation." Thus, we determine that claim 1, as written, includes amounts of pre-impregnated hardening material that are greater than those amounts upon which Appellants rely to demonstrate criticality of the claimed subject matter, i.e., "just barely but completely saturates". It follows, then, that based on Appellants' relied-upon disclosure (Spec. ¶ 53), the repair kit of claim 1 does not necessarily have the argued properties, and, absent actual evidence to the contrary, Appellants' criticality arguments as to claim 1 are unavailing.

For the same reasons, we likewise are unpersuaded by Appellants' arguments that "the discovery of the source or cause of the problem (gas formation during curing) and the unexpected improvement derived therefrom (the lack of channels and creation of a water tight seal) renders the Examiner's rejection improper and in clear error" (Appeal Br. 9), and that Callinan teaches away because it "teaches that the fabric should NOT be saturated in order to create 'porosity'" (*id.* at 18–19). Contrary to Appellants' assertion, claim 1 does not require the resulting seal to either

lack pores or channels, or to be water tight, and Appellants have provided no evidence that such properties would be inherent in the repair kit of claim 1. *In re Self*, 671 F.2d 1344, 1348 (CCPA 1982) (“[A]ppellant’s arguments fail from the outset because . . . they are not based on limitations appearing in the claims.”).

We also discern no persuasive merit in Appellants’ unsupported statement that “the prior art fails to teach complete saturation.” Appeal Br. 9. We emphasize again that Appellants have failed to direct us to a definition of what they regard as complete saturation, and have failed to explain how the claimed complete saturation is distinguishable over the prior art.

Here, contrary to Appellants’ assertion (Reply Br. 7), ¶ 53 does not “define[] saturation as sufficient to eliminate areas without hardening material but not enough to allow the formation of channels.” *See also*, Appeal Br. 11. Rather, ¶ 53 recites the term “saturates” only once and only in the context of “just barely but complete[]” saturation. Spec. ¶ 53. This statement is directly followed by exemplified ratios of “between 29 percent and 44 percent hardening material to fiber by weight,” and “approximately 36.5% hardening material to fabric by weight.” *Id.* Appellants’ reliance on ¶ 53, however, fails to distinguish the claimed saturation over the prior art relied on by the Examiner. Specifically, the Examiner finds that Callinan teaches optimizing the amount of resin based on the desired final properties of the composite (Final Act. 12, Ans. 26) and points to column 16 of Callinan, which states “fiberglass fabric is used and impregnated with the resin composition in an amount of about 31–55% by weight of the impregnated casting material.” Callinan, 16:13–15. Conspicuous by its

absence is a discussion in the Appeal and Reply Briefs attempting to distinguish Callinan's disclosed ranges of resin to fabric with the overlapping exemplified ranges in ¶ 53 upon which Appellants rely to support their criticality argument. Thus, Appellants' unembellished assertion that the limitation at issue is not taught is of no persuasive merit.

Further, we are unpersuaded by Appellants' arguments that the Examiner failed to consider certain claim rejections. Appeal Br. 11–16. Specifically, Appellants' argument that the Examiner failed to consider the preamble of the claim by citing a reference that “teaches an orthopedic casting tape . . . rather than a repair wrap for inanimate objects” (Appeal Br. 12) is unpersuasive because this argument does not address the Examiner's finding that “Callinan teaches in addition to orthopedic support materials[,] the resin coated substrates may be wrapped around pipes to stop leaks or for joining or to repair a broken shovel handle (see 17:35–60).” Final Act. 10; Ans. 10. Appellants' argument that the “Examiner fails to even note the presence of the claim element [‘] the hardening material . . . is pre-impregnated in the fabric in an inactivated state” (Appeal Br. 12) is likewise unavailing because it ignores the Examiner's finding that “Callinan teaches the substrate is impregnated with resin prior to wrapping.” Final Act. 10; Ans. 10, *citing* Callinan 17:35–60. Finally, Appellants' argument that the Examiner did not give patentable weight to the “configured to” limitations recited in claim 1 (Appeal Br. 13–16) is also unpersuasive because it does not address the Examiner's factual findings regarding how Callinan teaches each of the “configured to” limitations. Final Act. 10; Ans. 10, *citing* Callinan 10:52–67, 17:35–60.

In view of the above, Appellants have failed to identify reversible error in the rejection of claim 1 as being obvious under 35 U.S.C. § 103(a) over Callinan, and we sustain the rejection of this claim. Because claims 9 and 11–14 are not argued separately, they fall with independent claim 1. 37 C.F.R. § 41.37(c)(1)(iv).

Claim 10

Appellants state that “[c]laim 10 includes language similar to claim 1 and is, therefore, allowable for at least the same reasons articulated above.” Appeal Br. 19. We do not consider such statements to be separate arguments per our Rule 41.37 which requires an explanation as to why the examiner erred. Even if we did consider such statements to be a separate argument, we disagree with Appellants for the reasons provided above with respect to claim 1. We also provide the following additional observations.

First, we note that claim 10, like claim 1, does not require the resulting shell that is formed about the inanimate object to be without channels or sealed so that it is “water tight.” Claim 10 also does not require any specific repair strength or prevention of weaknesses therein. Further, while we recognize that this claim’s recitation of “just barely but completely saturates the fabric” is more consistent with ¶ 53 of the Specification which, according to Appellants, demonstrates the criticality of saturation, we still are not persuaded of reversible error.

Here, Appellants have neither defined nor specifically claimed what amount of resin (and/or ratio of resin to fabric) constitutes “just barely but

completely saturat[ing]” the fabric.¹ Rather, Appellants rely on ¶ 53 of the Specification to support their contention of criticality of the claimed subject matter. Paragraph 53, however, is devoid of specifics as to the types of resin and fabric used to achieve a water tight seal or a “strong” or “rigid” repair, or the ratios at which such properties would be realized. Spec. ¶ 53. Rather, ¶ 53 merely provides generic exemplified ratios of resin (i.e., “hardening material”) to fabric, without identifying the specific resin and/or fabric at which these generic ratios would affect the argued properties. *Id.*

We further emphasize that claim 10 is not limited to a specific resin or fabric; rather, when read in light of the Specification, claim 10 includes a multitude of resins and fabrics. For example, according to the Specification, the term “fabric” “can include *any fabric* that provides the desired properties” such as fiberglass, carbon fiber, aramid and para-aramid synthetic fibers, basalt, polyesters, nylon, and natural fibers, which Appellants acknowledge (Spec. ¶ 51) “are a very broad category.” Spec. ¶¶ 43, 46–51 (emphasis added). “Resin can include high bond

¹ “The test for definiteness is whether one skilled in the art would understand the bounds of the claim when read in light of the specification.” *Miles Laboratories Inc. v. Shandon Inc.*, 997 F.2d 870, 875 (Fed. Cir. 1993). “It is the applicants’ burden to precisely define the invention, not the PTO’s. See 35 U.S.C. § 112, ¶ 2. . . . [T]his section puts the burden of precise claim drafting squarely on the applicant.” *In re Morris*, 127 F.3d 1048, 1056 (Fed. Cir. 1997). Should prosecution of the application continue, we leave it to the Examiner to determine the propriety of an indefiniteness rejection under 35 U.S.C. § 112(b) for the limitation “the amount that just barely but completely saturates the fabric” recited in independent claims 10 and 15, and, by extension, their dependent claims 11–14 and 16–19.

strength epoxies, single stage as well as two part epoxies . . . [and] can include polyester resins both saturated and unsaturated.” Spec. ¶ 54.

There is no evidence in ¶ 53 that demonstrates that pre-impregnating any of the broad class of resins in an amount that “just barely but completely saturates” any of the broad class of fabrics yields any of the benefits upon which Appellants rely to support their criticality argument. Therefore, as with claim 1, Appellants’ arguments regarding criticality of the claimed subject matter of claim 10 are unpersuasive.

Accordingly, Appellants have failed to identify reversible error in the rejection of claim 10 as being obvious under 35 U.S.C. § 103(a) over Callinan, and we sustain the rejection of this claim.

Claim 20

Claim 20 depends from claim 1 and recites “wherein the shell has high impact strength and is water tight.” The Examiner finds that “Callinan teaches in addition to orthopedic support materials the resin coated substrates may be wrapped around pipes to stop leaks or for joining or to repair a broken shovel handle.” Final Act. 10, *citing* Callinan, 17:35–60. The Examiner also finds that Callinan discloses other uses of its resin-coated substrates cured to form a “substantially waterproof cast,” and interprets Callinan’s waterproof material as the claimed water tight shell. *Id.*, citing Callinan, 5:25–60.

Appellants focus their substantive arguments against the rejection of claim 20 on the Examiner’s interpretation of waterproof not being equivalent to “water tight” as recited in the claim. (Appeal Br. 19–20; Reply Br. 10–11). Specifically, Appellants attempt to contrast their water tight shell with Callinan’s “substantially waterproof cast” by characterizing the claimed

subject matter as “a shell which does not allow water to pass through the cured shell (or ‘prevent[s] water leakage’ as stated in paragraph [0069] of the filed specification).” Reply Br. 10. Appellants fail to address, however, the Examiner’s finding regarding Callinan’s additional disclosure at column 17 regarding Callinan’s “coated substrates can be used to wrap pipes for joining, reinforcement, [and] leak stoppage.” Callinan, 17:41–43.

Because Appellants do not address the full scope of the rejection as set forth by the Examiner, this argument does not reveal error in the Examiner’s obviousness conclusion.

We also are unpersuaded by Appellants’ arguments (Appeal Br. 20–21; Reply Br. 11–12) regarding the Examiner’s finding that Callinan discloses the “high impact strength” limitation because these arguments also fail to address the full scope of the rejection. Namely, Appellants’ arguments do not address the Examiner’s finding that Callinan’s coated substrates can be used to repair tools such as broken shovel handles. Final Act. 10, *citing* Callinan 17:35–60. We emphasize that Appellants have not directed us to a definition of the phrase “high impact strength” so as to distinguish over the cited reference. We further emphasize Appellants’ own disclosure which states “[e]xamples of high impact are things like hammers or axes or other tools that must withstand the load and vibrational force associated with repeated impacts and rebound.” Spec. ¶ 62.

Accordingly, Appellants have failed to identify reversible error in the rejection of claim 20 as being obvious under 35 U.S.C. § 103(a) over Callinan, and we sustain the rejection of this claim.

Rejection V

Appellants argue that “[c]laim 15 includes language similar to claim 1 and is, therefore, allowable for at least the same reasons articulated above.” Appeal Br. 21. Because Appellants’ arguments are unpersuasive of reversible error as to the rejection of claim 1, we are likewise unpersuaded by such arguments as they pertain to claim 15. Because Appellants do not separately argue the rejection of claims 2–8² and 16–17 (*id.*), they fall with their respective independent claims. 37 C.F.R. § 41.37(c)(1)(iv).

We, therefore, sustain Rejection V.

Rejection VI

Appellants argue that claim 19 “depends on claim 15 and is, therefore, allowable for at least the same reasons articulated above.” Appeal Br. 22. Because Appellants’ arguments regarding claim 15 are unpersuasive of reversible error, we are likewise unpersuaded by such arguments as they pertain to claim 19.

Thus, we sustain Rejection VI.

² Appellants do not make separate arguments directed to claims 7 and 8 over Callinan and Plumbing Supply. To the extent that Appellants identify reversible error as to claims 7 and 8 over Neamy and Plumbing Supply (Appeal Br. 17; Reply Br. 9–10), we direct the Examiner’s attention to page 5 of the Final Rejection dated Dec. 10, 2015 in corresponding application 13/970,230 where the Examiner relies on the disclosure of US 5,326,410 to Boyles at 7:51–63 for its disclosure of an outer wrapping material 18. Boyles at 3:58–59 appears to teach that such outer wrapping has a smooth surface.

Rejections I and III

Rejections I and III cover claims 1, 9–12, 19, and 20. Because we sustain Rejections IV and VI covering claims 1, 9–14, 19, and 20, we need not address Rejections I and III and therefore decline to reach them.

Rejection II

Rejection II covers claims 2–8 and 15–18. Because we sustain Rejection V covering claims 2–8 and 15–17, we need only address the Examiner’s rejection of claim 18 under Rejection II.

Appellants do not present separate arguments against the rejection of claim 18, but, rather, include claim 18 in a listing of grouped claims and state “claims 2–8 and claims 16–18 depend on claims 1 and 15 respectively and are, therefore, allowable for at least the reasons articulated above.”
Appeal Br. 17.

Because none of Appellants’ arguments “articulated above” at pages 8–16 of their Appeal Brief identify reversible error in the rejection of claim 18 or the claim from which it depends (claim 15), these arguments likewise fail to persuade us of reversible error.

Thus, we sustain the Examiner’s rejection of claim 18 and decline to reach the remaining claims under Rejection II.

SUMMARY

The rejection of claims 1, 9–14, and 20 as set forth in Rejection IV is affirmed.

The rejection of claims 2–8 and 15–17 as set forth in Rejection V is affirmed.

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The rejection of claim 19 as set forth in Rejection VI is affirmed.

We decline to reach Rejections I and III.

The rejection of claim 18 as set forth in Rejection II is affirmed. We decline to reach the merits of the rejection of the remaining claims under Rejection II.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1).

AFFIRMED